

SSS011-13

Room: 303

Time: May 28 13:45-14:00

Space-time heterogeneity in aftershock activity

Yosihiko Ogata^{1*}

¹Institute of Statistical Mathematics

For a number of aftershock sequences in and around Japan, we examine de-trended space-time coordinates after fitting the Omori-Utsu occurrence rate to each aftershock sequence. The case studies in conjunction with the fault locations and orientations of the mainshocks and focal large aftershocks indicate that the region of deficit and surplus in the aftershock activity well corresponds to the decreased and increased region of Coulomb failure stress, respectively, caused by various aseismic slips. We illustrate the relation between the transient stress changes and the anomalous aftershock activity in a local sub-region by six scenarios derived from the rate and state dependent friction law of Dieterich (1994).

References

Ogata, Y. (2010). Space-time heterogeneity in aftershock activity, *Geophys. J. Int.*, in press.

Keywords: Omori-Utsu function, Rate/state friction law, Relative quiescence and activation, Slow slip, Stress changes